

SEQUENCE LISTING

SEQ ID NO:1

human CNG2B amino acid sequence

5 MSQDTKVKTTESPPAPSKARKLLPVLDPSPGDYYYWNLNTMVFPVMYNLIILVCRACFPDLQHGYLVAWLVL
DYTSDLLYLDMVVRFHTGFLEQGILVVDKGRISSRYVRTWSFFLDLASLMPTDVVYVRLGPHTPTLRLNRF
LRAPRLF EAFDR TETR TAY PNAFRI AKMLY IFVVIH WNSCLY FALSRY LGFGRDAWVY PDPAQPGFERLRR
QYLYSFYFSTLILTTVGDTPPPAREEEYLFMVGD FLLAVMGFATIMGSMSSVIYNMNTADAAFYPDHALVKK
YMKLQHVNRKLERRIDWYQHLQINKMTNEVA ILQHLPERLRAEVAVSVHLSTLSRVQIFQNC EASLLEEL
10 VLKLQPQTYSPEYVCRKGDIGQEMYI IREGQLAVVADDGITQYAVLGAGLYFGEISI INIKGNMSGNRRTA
NIKSLGYSDLFCLSKEDLREVLSEYPQAQTIMEEKGREILLKMNKLDVNAEAAEIALQEATESRLRGLDQQL
DDLQTKFARLLAELESSALKIAYRIERLEWQ TREWMPMEDLAEADDEGEPEEGTSKDEEGRASQEGPPGPE

SEQ ID NO:2

15 complete human CNG2B nucleotide sequence

AGAGGGGAGGAGGAAAACAGAGACAAGACTCAGGCTTCCCTCTGAGGCATGCACCCCCACCTTCTCCAGGGA
TCTCATTAGAGGTGTTTAGCTGGGCAGGTGTAAGCCCAGGCCCTGGGAGACAGGGCAGAGTGCTAGAGCTAG
ACTGTCTCCACCCCTTCAGTAGCGCTAGCTCTGGTTGTGTTGCTAAGAGCCCCAAAGACAAAGAAGTCACAG
20 CAGAAGCCCAACAGCAGCCTCCTTCAGACAGTCAGGCACTAGTGCCCAACTCCAGAAGTCCCCTACAGGCAG
AGAGGGTGTGGACATCTCACACCCCAGCACACCAGACCACAGAACCATGAGCCAGGACACCAAAGTGAAGACAA
CAGAGTCCAGTCCCCCAGCCCCATCCAAGGCCAGGAAGTTGCTGCCTGTCTGGACCCATCTGGGGATTACT
ACTACTGGTGGCTGAACACAATGGTCTTCCCAGTCATGTATAACCTCATCATCCTCGTGTGCAGAGCCTGCT
TCCCCGACTTGCAGCACGGTTATCTGGTGGCCTGGTTGGTGCTGGACTACACGAGTGACCTGCTATACCTAC
25 TAGACATGGTGGTGCCTTCCACACAGGATTCTTGGAACAGGGCATCCTGGTGGTGGACAAGGGTAGGATCT
CGAGTCGCTACGTTTCGCACCTGGAGTTTCTTCTTGACCTGGCTTCCCTGATGCCACAGATGTGGTCTACG
TGCGGCTGGGCCCCGCACACCCACCCTGAGGCTGAACCGCTTTCTCCGCGCGCCCCGCTCTTCGAGGCCT
TCGACCGCACAGAGACCCGCACAGCTTACCCAAATGCCTTTCGCATTGCCAAGCTGATGCTTTACATTTTTG
TCGTCATCCATTGGAACAGCTGCCTATACTTTGCCCTATCCCGGTACCTGGGCTTCGGGCGTGACGCATGGG
30 TGTACCCGGACCCCGCGCAGCCTGGCTTTGAGCGCCTGCGGCGCCAGTACCTCTATAGCTTTTACTTCTCCA
CGCTGATACTGACTACAGTGGGCGATACACCGCCGCCAGCCAGGGAAGAAGAGTACCTCTTCATGGTGGGCG
ACTTCTGCTGGCCGTTCATGGGTTTCGCCACCATCATGGGTAGCATGAGCTCTGTCTATCTACAACATGAACA
CTGCAGATGCGGCTTTCTACCCAGATCATGCACTGGTGAAGAAGTACATGAAGCTGCAGCACGTCAACCGCA
AGCTGGAGCGGCGAGTTATTGACTGGTATCAGCACCTGCAGATCAACAAGAAGATGACCAACGAGGTAGCCA
35 TCTTACAGCACTTGCTGAGCGGCTGCGGGCAGAAGTGGCTGTGTCTGTGCACCTGTCCACTCTGAGCCGGG
TGCAGATCTTTCAGAACTGTGAGGCCAGCCTGCTGGAGGAGCTGGTGCTGAAGCTGCAGCCCCAGACCTACT
CACCAGGTGAATATGTATGCCGCAAAGGAGACATTGGCCAAGAGATGTACATCATCCGAGAGGGTCAACTGG
CCGTGGTGGCAGATGATGGTATCACACAGTATGCTGTGCTCGGTGCAGGGCTCTACTTTGGGGAGATCAGCA
TCATCAACATCAAAGGGAACATGTCTGGGAACCGCCGCACAGCCAACATCAAGAGCCTAGGTTATTTCAGACC

TATTCTGCCTGAGCAAGGAGGACCTGCGGGAGGTGCTGAGCGAGTATCCACAAGCACAGACCATCATGGAGG
 AGAAAGGACGTGAGATCCTGCTGAAAAATGAACAAGTTGGACGTGAATGCTGAGGCAGCTGAGATCGCCCTGC
 AGGAGGCCACAGAGTCCCGGCTACGAGGCCTAGACCAGCAGCTGGATGATCTACAGACCAAGTTTGCTCGCC
 TCCTGGCTGAGCTGGAGTCCAGCGCACTTAAGATTGCTTACCGCATTGAACGGCTGGAGTGGCAGACTCGAG
 5 AGTGGCCAATGCCCCGAGGACCTGGCTGAGGCTGATGACGAGGGTGAGCCTGAGGAGGGAACCTCCAAAGATG
 AAGAGGGCAGGGCCAGCCAGGAGGGACCCCCAGGTCCAGAGTGACCCCATCCCCATCCCCAGGATTCCCACC
 TCCTAGTGAATCCAGAGTTGTAGTAAAGCCTAACTGCTGCAACTCTGTTCATCCTGTCTGCGAGATCACAGAC
 ACAGGAGCGAATTGGTCTGTAGATGCCCAGCTAGAGATATAGGAGTTTAACGCACATTCAGCCCCCACTTAC
 CAGTACACACACACACACACACACACACATTGTGCTCATAGACCTGTTGGCCCCAAGACTGTGCATTCCAT
 10 CTAA

SEQ ID NO:3

human CNG2B coding sequence

15 ATGAGCCAGGACACCAAAGTGAAGACAACAGAGTCCAGTCCCCAGCCCCATCCAAGGCCAGGAAGTTGCTG
 CCTGTCCTGGACCCATCTGGGGATTACTACTTGGTGGCTGAACACAATGGTCTTCCCAGTCATGTATAAC
 CTCATCATCCTCGTGTGCAGAGCCTGCTTCCCCGACTTGCGAGCAGGTTATCTGGTGGCCTGGTTGGTGGCTG
 GACTACACGAGTGACCTGCTATACCTACTAGACATGGTGGTGGCTTCCACACAGGATTCTTGAACAGGGC
 ATCCTGGTGGTGGACAAGGGTAGGATCTCGAGTCGCTACGTTGCGACCTGGAGTTTCTTCTTGGACCTGGCT
 20 TCCCTGATGCCCACAGATGTGGTCTACGTGCGGCTGGGCCCCGACACACCCACCCCTGAGGCTGAACCGCTTT
 CTCCGCGCGCCCCGCTCTTCGAGGCCTTCGACCGCACAGAGACCCGACAGCTTACCCAAATGCCTTTTCGC
 ATTGCCAAGCTGATGCTTTACATTTTGTGTCATCCATTGGAACAGCTGCCTATACTTTGCCCTATCCCGG
 TACCTGGGCTTCGGGCGTGACGCATGGGTGTACCCGGACCCGCGCAGCCTGGCTTTGAGCGCCTGCGGCGC
 CAGTACCTCTATAGCTTTTACTTCTCCACGCTGATACTGACTACAGTGGGCGATACACCGCCGCCAGCCAGG
 25 GAAGAAGAGTACCTCTTCATGGTGGGCGACTTCCTGCTGGCCGTCATGGGTTTCGCCACCATCATGGGTAGC
 ATGAGCTCTGTTCATCTACAACATGAACACTGCAGATGCGGCTTTCTACCCAGATCATGCACTGGTGAAGAAG
 TACATGAAGCTGCAGCACGTCAACCGCAAGCTGGAGCGGCGAGTTATTGACTGGTATCAGCACCTGCAGATC
 AACAAGAAGATGACCAACGAGGTAGCCATCTTACAGCACTTGCCTGAGCGGCTGCGGGCAGAAGTGGCTGTG
 TCTGTGCACCTGTCCACTCTGAGCCGGGTGCAGATCTTTCAGAACTGTGAGGCCAGCCTGCTGGAGGAGCTG
 30 GTGCTGAAGCTGCAGCCCCAGACCTACTCACCAGGTGAATATGTATGCCGCAAAGGAGACATTGGCCAAGAG
 ATGTACATCATCCGAGAGGGTCAACTGGCCGTGGTGGCAGATGATGGTATCACACAGTATGCTGTGCTCGGT
 GCAGGGCTCTACTTTGGGGAGATCAGCATCATCAACATCAAAGGGAACATGTCTGGGAACCGCCGCACAGCC
 AACATCAAGAGCCTAGGTTATTTCAGACCTATTCTGCCTGAGCAAGGAGGACCTGCGGGAGGTGCTGAGCGAG
 TATCCACAAGCACAGACCATCATGGAGGAGAAAGGACGTGAGATCCTGCTGAAAAATGAACAAGTTGGACGTG
 35 AATGCTGAGGCAGCTGAGATCGCCCTGCAGGAGGCCACAGAGTCCCGGCTACGAGGCCTAGACCAGCAGCTG
 GATGATCTACAGACCAAGTTTGCTCGCCTCCTGGCTGAGCTGGAGTCCAGCGCACTTAAGATTGCTTACCGC
 ATTGAACGGCTGGAGTGGCAGACTCGAGAGTGGCCAATGCCCGAGGACCTGGCTGAGGCTGATGACGAGGGT
 GAGCCTGAGGAGGGAACCTCCAAAGATGAAGAGGGCAGGGCCAGCCAGGAGGGACCCCCAGGTCCAGAGTGA

SEQ ID NO:4

(sense strand primer)

GCAGATCTTTCAGAACTGTGAGGCCA

5

SEQ ID NO:5

Oligo 2 (antisense strand primer)

CCTGCCCTCTTCATCTTTGGAAGTTC

10

SEQ ID NO:6

Oligo 3 (sense strand primer)

GCCAACATCAAGAGCCTAGGTTATTC

15

SEQ ID NO:7

Oligo 4 nested gene specific oligo (sense strand primer)

GGATGATCTACAGACCAAGTTTGCTCG

20

SEQ ID NO:8

(sense strand primer)

ATGAGCCAGGACACCAAAGTGAAGAC

25

SEQ ID NO:9

Oligo 6 (antisense primer specific to human CNG2B)

GTTGATGATGCTGATCTCCCCAAAG

30

SEQ ID NO:10

Oligo 7 (CNG2B-specific antisense strand primer)

GGATGATGAGGTTATACATGACTGGG

5 AGGCTAGCAACTTCCTGGCCTTGGAT

10 GCGAAAGCTTCCACCATGAGCCAGGACACCAAAGTG

15 CATGTCTAGAATGGGGATGGGGTCACTCTGGACCT

20 GCAGATCTTCCAGAACTGTAAGGCCA

25 ATGAGCCAGGACGGNAARGTNAARAC